450 RIGID PAVEMENT

Item 451 Reinforced Portland Cement Concrete Pavement

451.06 Placing Concrete. Delete last paragraph and add the following paragraphs:

The City prepares four test cylinders from each 100 cubic yards ($90m^3$) of concrete, or fraction thereof, each day. Test cylinders are made and tested in accordance with ASTM C 31 AND C 39. Testing includes breaking one cylinder after 7 days and two cylinders after 28 days (one cylinder is a "hold" cylinder).

Use concrete, which develops an average seven-day compressive strength of 2,900 psi (20,000 kPa) and a minimum strength of 2,400 psi (16,550 kPa) and develops an average 28 day compressive strength of 4,000 psi (27,575 kPa) and a minimum strength of 3,400 psi (23,450 kPa). Increase the cement content of the mix without additional cost to the City when cylinders fall below the average compressive strengths of 2,900 psi (20,000 kPa) (seven-day) and 4,000 psi (27, 575 kPa) (28-day). Pavement will be rejected when cylinders fall below the minimum compressive strengths of 2,400 psi (16,550 kPa) (seven-day) and 3,400 psi (23,450 kPa) (28-day).

Plan work so that the placing of concrete proceeds from the lower to the higher points along the profile of the street. Concrete placement may not proceed from higher to lower points when the grade is more than three percent without the approval of the Engineer.

451.08 Joints. Add after the sixth paragraph:

Plan and execute paving and sawing operations so that any paving and/or sawing work is not in violation of the City's Noise Ordinance unless otherwise directed or authorized in writing by the Engineer.

D. Contraction Joint. Add after the final paragraph:

Construct contraction joints approximately 15 feet (4.6 m) apart unless otherwise directed by the Engineer.

451.09 Finishing. Delete the last paragraph of this section.

451.11 Removing Forms. Add:

Cure concrete for at least 12 hours before removing forms. Leave the forms in place for at least 48 hours when the temperature is below 50^{o} F. (10^{0} C).

Item 499 Concrete – General

499.06 Equipment. Add:

C. Mobile Volumetric Batching and Continuous Mixing Plant. Provide mobile mixers capable of producing thoroughly mixed and uniform concrete within the specified mixing period and to discharge and distribute the mixture without segregation on the prepared grade as approved by the Engineer.

The mixing mechanisms, calibrated proportioning devices, and equipment dial scales for each mobile mixer to be inspected and sealed by the City approved laboratory for conformance with ASTM C685-71T at no cost to the City.

The Supplier's central loading plants or loading pads utilized for the loading cycle of the mobile mixers to meet the requirements of ASTM C94-71.

Make available to a City approved laboratory the specified recommendations of the equipment manufacturer in the operation of the equipment and the calibration and use of the various equipment control devices necessary to produce City of Cincinnati specification concrete during the sealing of the mixer equipment and at such other times as recalibration of controls of the equipment are necessary.

Comply with the strength requirements for acceptance under ASTM C685-71T for concrete mixed with mobile volumetric mixing plant under this item. Proportion mix to meet the design strength requirements of an over design factor of 1.34, consistent with obtaining a coefficient of variation of the tested concrete of 20 percent. Use this coefficient of variation until a history of use of the individual plant within a six-month period proves otherwise to the satisfaction of the City Engineer.

499.09 Mixing Concrete. Delete second last paragraph.